Title: IUPUI Center for HPV Research: Effects of a Brief Health Messaging Intervention on HPV Vaccine Acceptability among Parents of Adolescent Sons

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Background: Human papillomavirus (HPV) is an very common infection that is a primary cause of warts and many cancers, including cervical, anal, vaginal, vulvar, penile, and head and neck cancers. In an effort to address the problems associated with HPV infection and prevention, the Center for HPV Research at IUPUI (Zimet & Fortenberry, Co-Directors) fosters collaboration among investigators from multiple disciplines and departments at IUPUI, IU Bloomington, Purdue University, and University of Notre Dame. There currently are 25 faculty and 7 pre- and post-doctoral trainees who are members of the Center. The Center for HPV Research was established in July, 2012 with funds from the IUPUI Signature Center Initiative, The Department of Pediatrics, and the IU Simon Cancer Center. In this abstract we highlight a study representing a collaboration among 5 center members, including our current center-supported post-doc.

Objectives: HPV vaccination coverage remains very low among adolescent males in the U.S. We explored the effect of brief Web-based health messages on parents' willingness to vaccinate their sons against HPV.

Methods: A U.S. national sample of parents of 11-17-year-old sons (N=779) completed a Web-based survey assessing attitudes and behaviors related to HPV vaccination. Parents of non-vaccinated sons (79% of the sample) were randomized to a two-level normalizing message (NM) condition: no message vs. NM ("Millions of doses of the vaccine have been administered to adolescent girls in the US at this time.") and a three-level protection message (PM) condition: no message vs. son-only PM ("The HPV vaccine can protect your son from most kinds of genital warts and anal cancers,") vs. son+partner PM (son-only message plus "If your son gets vaccinated it can also protect his future spouse from genital warts and cancer."). Parents then reported willingness to vaccinate their sons against HPV on a scale of 1-100. Intervention effects were analyzed using a 2×3 between-subjects ANOVA.

Results: Mean willingness was 55.2 (SD=29.7). A significant interaction was found between health messaging conditions, $F(2,576) = 3.17$, $p = 0.043$). Parents receiving the son-only PM reported significantly lower willingness if they received the NM vs. no NM (p=.014). Parents receiving no NM reported significantly higher willingness if they received the son + partner PM vs. no PM (p=.029).

Conclusions: Reading brief online health messages affected parents' willingness to vaccinate their adolescent sons against HPV. Overall, presenting normalizing information pertaining to adolescent females (for whom routine immunization was first recommended) appeared to lower parent willingness to vaccinate their adolescent sons. Presenting information about protecting their son and/or son's partner against HPV-associated outcomes appeared to increase parent willingness to vaccinate in the absence of such normalizing information.